

REMARKS

In the Office Action, the Examiner indicated that claims 1 through 11 are pending in the application and the Examiner rejected all claims.

Rejection of Claims 1-11 under 35 U.S.C. §103(a)

On page 2 of the Office Action, the Examiner rejected claims 1-3 and 7-10 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,588,871 to Studholme et al. in view of US Patent No. 6,788,270 to Suprunov.

On page 4 of the Office Action, the Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Studholme in view of Suprunov, and further in view of US Patent No. 6,041,924 to Tajima.

On page 4 of the Office Action, the Examiner rejected claims 5, 6, and 11 under 35 U.S.C. §103(a) as being unpatentable over Studholme in view of Suprunov, and further in view of US Patent No 6,181,564 to Furusho.

The Present Invention

The present invention discloses a portable device for receiving an electronic component used for communications, such as a transmitter or receiver. The portable device includes a body for accommodating the electronic component. The portable device includes an upper case and a lower case, each having a cavity. A holding member holds the peripheral portions of the upper case and the lower case such that the upper case and lower case are connected to

each other with the cavities opposed to each other, creating a space for storing and completely enclosing the electronic component. By removing the holding member, the upper case can be removed from the lower case and the electronic component can be removed.

U.S. Patent No. 6,588,871 to Studholme et al.

U.S. Patent No. 6,588,871 to Studholme et al. ("Studholme") teaches a holding device for holding a memory chip attached to a printer cartridge. The device is a U shaped holder with a recess into which the memory chip is slid into through the open end of the U shaped holder. The holder is arranged to frictionally hold the memory chip in place and the memory chip can be removed through the open end of the U shaped holder. The memory chip is fully exposed except for the two channels in which it slides within the U shaped holder.

Additionally, Studholme teaches means for removing the holder from a printer cartridge for transporting the memory chip, as well as accessing and resetting the information on the memory chip. The Examiner acknowledges that Studholme fails to disclose an upper case having a cavity and a lower case having a cavity such that the cases can be aligned with the cavities opposed to each other.

U.S. Patent No. 6,788,270 to Suprunov et al.

U.S. Patent No. 6,788,270 to Suprunov et al. ("Suprunov") teaches an antenna structure for wireless devices. The antenna includes an antenna arm and a conical spring radiating element attached to the antenna arm. The conical radiating element may be protected

by a cap and can be compressed to fit within the cap for storage. The antenna may be inserted into a PC card for storage when not in use. The Examiner relies on Suprunov for the alleged teaching of separate cavities within the top and bottom housings that are connected to each other in such a way that results in the cavities being opposed to each other.

U.S. Patent No. 6,041,924 to Tajima et al.

U.S. Patent No. 6,041,924 to Tajima et al. ("Tajima") teaches a water-resistant case that covers the entire body of a portable receiver while not decreasing the sound effect of a buzzer from the portable receiver. The case has a display window positioned to match that of a display light on the portable receiver, a hole tightly closed with a seal capable of letting the air to get through but not a drop of water, the hole positioned to align with the buzzer of the receiver, and a button to push the switch on the receiver from the outside. The Examiner relies on Tajima to allegedly teach providing a seal within the case.

U.S. Patent No. 6,181,564 to Furusho

U.S. Patent No. 6,181,564 to Furusho teaches a casing for an integrated circuit card, or IC card, that utilizes a top plate and a lower plate to form the case. Furusho further teaches that the plates can be made of different materials, including metal if outside conduction connections are required, or synthetic resin if light-weight, non-conductive casings are needed. The Examiner relies on Furusho to teach providing a casing made with a synthetic resin having side walls made of metal.

The Examiner has not Established a *prima facie* Case of Obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

The above amendment revises claims 1 and 11 to more clearly define and distinguish the invention over the cited prior art. Pursuant to 37 CFR 1.111 and 1.112, entry of the above amendment and reconsideration of the present application is respectfully requested.

As described in the specification at page 1, line 22 to page 2, line 10, in a smart entry system for a vehicle, the doors automatically unlock when a user who is carrying a portable device approaches the vehicle and automatically lock when the user moves away from the vehicle. Hence, it is desirable that the user maintain the portable device on his person, and that the portable device be conveniently thin and lightweight. In addition, the portable device must be able to transmit and receive wireless signals from a reasonable distance, and be sufficiently robust to withstand occasional impacts from being dropped without being rendered inoperative. More particularly, the portable device serves as an electronic key for the vehicle, and is thus required to be highly portable, yet robust enough that a user is not stranded or locked out of the vehicle by the electronic key being accidentally dropped and rendered non-functional.

The cited prior art does not recognize these problems that are unique to the motor vehicle field. Studholme is directed to a holder (10) for holding a memory chip (12) in a printer cartridge (16), and a device (14) for altering the data on the chip (12) as described at column 4, lines 31-34 of the patent. The device (14) writes to the chip (12) by contacts (34) located on resilient fingers (36) as described at column 4, lines 43-58 and shown in Figure 4. Thus, communication is not wireless.

Suprunov is directed to a PC card assembly (100) having an antenna (101) that is retractable into the assembly (100) as described at column 3, lines 11-15 of the patent. While Suprunov may be directed to wireless communication, it is not done through the walls of the PC card assembly (100), but through an antenna that is exposed to the exterior of the assembly (100). Again, the prior art does not recognize the difficulties in a smart entry system for a vehicle. In particular, a PC card would be too fragile and too large to conveniently and effectively serve as an electronic key for a vehicle and the risk of a user being stranded or locked out of the vehicle is simply too great due to a PC card being damaged by droppage or exposure to the environment.

In contrast, the invention as defined by claim 1 in the above amendment recites enclosing an electronic component for wireless communication in a portable device body that is made of a non-metal material for permitting wireless signals to pass therethrough. Accordingly, the claimed device would be more rugged and convenient for use as an electronic key in a smart entry vehicle system, unlike a PC card. It is respectfully submitted that this

distinguishes claim 1 as amended over the cited art, and likewise, claims 2-10, which all depend directly or indirectly from claim 1.

For the above reasons, Studholme, Suprunov and Tajima, whether considered alone or in any combination, fail to teach or suggest the claimed invention. The Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-3 and 7-10 under 35 U.S.C. §103(a) based on the combination of Studholme in view of Suprunov, and further in view of Tajima.

The above amendment revises claim 11 to correct the spelling of “resin” and to recite that the electronic component is used “for communication by receipt and transmission of wireless signals.” The amendment revises claim 11 to further recite that the portable device body is for “enclosing the electronic component therein and permitting receipt and transmission of wireless signals through the synthetic resin for communication with the electronic component enclosed in the portable device body without significantly reducing the receiving and transmission capability of the electronic component.” It is believed that this distinguishes over the cited art.

Concerning the citation of Figure 10 of Furusho in the Office Action, it is respectfully submitted that this teaches away from the claimed invention. Furusho et column 1, lines 9-20, teaches an IC card with a rectangular lower cover (21) formed of a metallic plate having a base portion (21a) in the shape of a flat plate and side walls (21b) formed by bending. This mates with a rectangular upper cover (22) formed of a metallic plate having a base portion (22a) in the shape of a flat plate and sidewalls (22b) formed by bending.

Accordingly, any electronic component enclosed in the IC card would have its capability to transmit and receive wireless signals significantly reduced due to being surrounded on all sides by metal. While Furusho may disclose a frame (23) made of a synthetic resin, the frame (23) is an internal structure for supporting a substrate member (25) having conductive patterns and electric components (24). There is no suggestion for forming the upper and lower covers (21) and (22) of synthetic resin, rather than metal.

Therefore, the cited teachings for an IC card case would necessarily require an antenna extendable therefrom for increasing the capability to transmit and receive wireless signals as in Suprunov. Notwithstanding, this defeats the purpose of a smart entry system because it would require the user to manually extend the antenna rather than having the vehicle doors automatically lock and unlock merely by the user approaching or departing from the vehicle with the portable device. Further, such an antenna would detract from the ruggedness and cause the device to be more fragile, especially with the antenna extended. Hence, the portion of Furusho cited in the Office Action teaches away from the claimed invention in that it teaches enclosing an electronic component for wireless communication with metal on all sides.

In contrast, claim 11 recites a holding member made of metal, but with the holding member detachably “holding peripheral portions of the upper case and the lower case.” Therefore signals can be received and transmitted wirelessly via the electronic component over a path that does not require them to penetrate through metal or via an antenna connection path into a metal enclosure.

Accordingly, Furusho teaches away from the claimed invention. Specifically, based upon the citation to Furusho, one would not be led to provide a portable device body made of a synthetic resin as recited in claim 11. To the contrary, one would be led to provide a device body made of metal, with an antenna extendible therefrom, which would neither meet the recitations of the claimed arrangement nor achieve the advantages provided thereby.

As discussed in M.P.E.P. 2143.01, there must be a suggestion or motivation to modify the cited references to meet the limitations of the claim which is being rejected as obvious over the references. There is no suggestion in the cited references to make the combination recited in claim 11, other than the disclosure in the present application, and that would be improper hindsight reasoning. The Furusho citation suggests a combination contrary to the claimed invention. As stated in M.P.E.P. 2145, “[a] prior art reference that “teaches away” from the claimed invention is a significant factor to be considered in determining obviousness.” Accordingly, it is submitted that claim 11 is non-obvious over the cited prior art.

For the above reasons, Studholme, Suprunov and Furusho, whether considered alone or in any combination, fail to teach or suggest the claimed invention. The Examiner is respectfully requested to reconsider and withdraw the rejection of claims 5, 6 and 11 under 35 U.S.C. §103(a) based on the combination of Studholme in view of Suprunov, and further in view of Furusho.

Conclusion

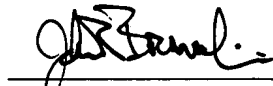
The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted

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Date



John R. Brancolini
Registration No. 57,218

SYNNESTVEDT & LECHNER LLP
2600 ARAMARK Tower
1101 Market Street
Philadelphia, PA 19107

Telephone: (215) 923-4466
Facsimile: (215) 923-2189